



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|-----------------------------|------------------|
| 10/730,560 | 12/08/2003 | Gary W. Groves | 1316N001633 | 4251 |
| 27572 | 7590 | 05/26/2006 | | |
| HARNESSE, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303 | | | | |
| | | | EXAMINER BURCH, MELODY M | |
| | | | ART UNIT 3683 | PAPER NUMBER |

DATE MAILED: 05/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation of the single valve assembly separate from the piston being in direct communication with the upper and lower working chambers as recited in lines 7-8 from the bottom of claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. See 112 section below.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-11 and 13-21 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Re: claim 1. Applicant recites in claim 1, as amended, in lines 7-8 from the bottom of the claim the limitation of a single valve assembly separate from the piston in "direct communication with said upper and lower working chambers and said reserve chamber." Examiner notes, however, that according to figure 1 of the instant invention, the single valve assembly 22 separate from the piston is not in direct communication but is in indirect communication with the upper and lower working chambers by way of the reserve chamber.

The remaining claims are rejected due to their dependency from claim 1.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-11 and 13-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6464048 to Groves et al. in view of US Patent 5586627 to Nezu et al.

Re: claims 1 and 21. Groves et al. show in figures 1, 2, and 5 an adjustable shock absorber comprising a pressure tube 16 defining a working chamber 24,26, a piston rod 14 extending through the pressure tube and into the working chamber, a piston 12 slidably disposed within the pressure tube and connected to the piston, the piston dividing the working chamber into an upper working chamber 24 and a lower working chamber 26, a reserve tube surrounding the pressure tube and defining a reserve chamber shown to the left of the lead line of 54, a single valve assembly 22 separate from the piston in direct communication with the upper and lower working chambers and the reserve chamber to the same extent as Applicant's invention, the valve assembly defining a first flow path 88, portions of the reserve chamber and element 130 which includes a first variable orifice 94 particularly on portion 88 of the first flow path in communication with the upper working chamber for controlling flow from the upper working chamber and a second flow path which includes a second variable orifice 84 in communication with the lower working chamber for controlling flow from the lower working chamber, the first flow path being the only direct flow path extending between the upper working chamber and the reserve chamber.

Groves et al. fail to include the limitation of the piston defining a plurality of compression fluid passages and a plurality of rebound fluid passages or the limitation of

Art Unit: 3683

a compression valve attached to the piston allowing fluid flow from the lower working chamber to the upper working chamber when a first fluid pressure is exerted on the compression valve and rebound valve attached to the piston, the rebound valve allowing fluid flow from the upper working chamber to the lower working chamber when a second fluid pressure is exerted on the rebound valve, the second fluid pressure being greater than the first fluid pressure.

Nezu et al. teach in figure 3 the limitation of an adjustable shock absorber comprising a piston defining a compression fluid passage 61 and a rebound fluid passage 60.

In *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1955) the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the piston of Groves et al. to have included compression fluid passages and rebound fluid passages, as taught by Nezu et al., in order to provide a means of communication between the upper and lower chambers as taught in col. 8 lines 30-31 of Nezu et al.

Nezu et al. teach in figure 3 the limitation of a compression valve 63 attached to the piston allowing fluid flow from the lower working chamber to the upper working chamber when a first fluid pressure is exerted on the compression valve and rebound valve 62 attached to the piston, the rebound valve allowing fluid flow from the upper

Art Unit: 3683

working chamber to the lower working chamber when a second fluid pressure is exerted on the rebound valve.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the piston of Groves et al. to have included a compression and rebound valve, as taught by Nezu et al., in order to provide a means of generating a damping force during instances when the pressure in the upper and lower chambers exceeds predetermined values as taught by Nezu et al. in col. 10 line 66- col. 11 line 4 and col. 11 line 44-49.

Groves et al., as modified, do not explicitly express that the second fluid pressure is greater than the first fluid pressure. Nezu et al. teach in col. 40 lines 41-44 that the shock absorbers can be arranged such that different (great and small) damping forces can be set at the extension side and the contraction side.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the first and second pressures of Groves et al., as modified, to have included the second pressure being greater than the first pressure such that greater damping forces exist at the extension side, in view of the teachings of Nezu et al., in order to provide a means of obtaining damping force properties suitable for the suspension control of a particular application.

Re: claim 2. Groves et al. show in figure 2 the limitation wherein the valve assembly includes a solenoid valve 48 having means for controlling the first variable orifice.

Re: claim 3. Groves et al. figure 2 show the limitation wherein the means for controlling the first variable orifice includes a spool valve 62.

Re: claim 4. Groves et al. show in figure 2 the limitation wherein the solenoid valve includes means 62 for controlling the second variable orifice.

Re: claim 5. Groves et al. show in figure 2 the adjustable shock absorber according to Claim 4 wherein, said means for controlling said first and second orifices include a spool valve 62.

Re: claim 6. Groves et al. show in figures 2 and 5 the adjustable shock absorber according to Claim 1 wherein, said valve assembly includes a first poppet valve in communication with said upper working chamber to the same extent as Applicant's.

Re: claim 7. Groves et al. show in figures 2 and 5 the adjustable shock absorber according to Claim 6 wherein, said valve assembly includes a second poppet valve is in communication with said lower working chamber to the same extent as Applicant's.

Re: claim 8. Groves et al. show in figures 2 and 5 the adjustable shock absorber according to Claim 6 wherein, said shock absorber includes a reserve tube 18 defining a reserve chamber 36, said first and second poppet valves being in communication with said reserve chamber to the same extent as Applicant's.

Re: claims 9 and 15. Groves et al. show in figure 2 the limitation wherein the valve assembly includes a solenoid valve 58,62,70 having means for controlling said first variable orifice.

Re: claims 10 and 16. Groves et al. show in figure 2 the limitation wherein the means for controlling the first variable orifice includes a spool valve 62.

Re: claims 11 and 17. Groves et al. show in figure 1 the absorber further comprising a base valve assembly 246 disposed between the lower working chamber and the reserve chamber as shown, the base valve assembly controlling fluid flow from the reserve chamber to the lower working chamber, the base valve assembly prohibiting all fluid flow from the lower working chamber to the reserve chamber as disclosed in col. 4 lines 60-63.

Re: claim 13. Groves et al. show in figures 1, 2, and 5 the adjustable shock absorber wherein said first poppet valve is in communication with said lower working chamber and said blowoff valve is in communication with said upper working chamber to the same extent as Applicant's.

Re: claim 14. Groves et al. show in figures 1, 2, and 3 the adjustable shock absorber wherein, said shock absorber includes a reserve tube 18 defining a reserve chamber 36, said first poppet valve being in communication with said reserve chamber to the same extent as Applicant's.

Re: claim 18. Groves et al. show the limitation wherein the first variable orifice is in communication with the lower working chamber as shown in figure 5.

Re: claim 19. Groves et al. show the limitation wherein the second variable orifice is in communication with the upper working chamber as shown in figure 5.

Re: claim 20. Groves et al. show the limitation wherein the shock absorber includes a reserve tube 18 defining a reserve chamber 36, the first and second variable orifices being in communication with the reserve chamber as shown in figures 1 and 5.

Response to Arguments

6. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James McClellan can be reached on 571-272-6786. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3683

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mmb
May 24, 2006

Melody M. Burch
Melody M. Burch
Primary Examiner
Art Unit 3683
5/24/06